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FOREST SURVEY REPORT 142
MAY 1962

Forest Statistics for

PACIFIC NORTHWEST
FOREST AND RANGE EXPERIMENT STATION
U.S. DEPT. OF AGRICULTURE · FOREST SERVICE

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Forest Survey Report 142
May 1962

FOREST STATISTICS FOR

ISLAND AND KITSAP COUNTIES, WASHINGTON, 1959;

SAN JUAN COUNTY, WASHINGTON, 1960

by

Benjamin Spada

PACIFIC NORTHWEST
FOREST AND RANGE EXPERIMENT STATION
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FOREST SERVICE U.S. DEPARTMENT OF AGRICULTURE

PREFACE

This publication summarizes the results of the second inventory of the forests of Island County, Wash., the third inventory of Kitsap County, Wash., completed in 1959, and the second inventory of San Juan County, Wash., completed in 1960. Previous inventories of Kitsap County were made in 1933 and 1940. Island and San Juan Counties were previously inventoried in 1932. The results of these inventories were published as "Forest Statistics for Kitsap County, Washington," March 1934; "Forest Statistics for Kitsap County, Washington," Forest Survey Report 82, April 1941; "Forest Statistics for Island County, Washington," March 1934; and "Forest Statistics for San Juan County, Washington," March 1934. Such inventories are a part of the Forest Survey, a nationwide project of the Forest Service authorized by the McSweeney-McNary Forest Research Act of 1928, amended June 25, 1949. The purpose of the Forest Survey is to periodically inventory the extent and condition of forest lands and the volume of timber on them, to ascertain rates of forest growth and depletion, to estimate present consumption of timber products and probable future trends in timber requirements, to analyze and make available survey information needed in the formulation of forest policies and programs, and to make resurveys as necessary to keep the basic information up to date.

The Forest Survey is conducted in the various forest regions of the Nation by the regional experiment stations of the Forest Service. In the States of Oregon and Washington, it is an activity of the Pacific Northwest Forest and Range Experiment Station at Portland, Oreg.

The 1959 inventory of Island and Kitsap Counties and the 1960 inventory of San Juan County were based on sampling techniques which did not include a type map; thus no county type maps were prepared.

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ISLAND, KITSAP, AND SAN JUAN COUNTIES' FOREST RESOURCE IN BRIEF

COMMERCIAL FOREST LAND--

Covers 74 percent of these counties, or 369,000 acres;
Is 90 percent privately owned; and
Is composed of 18 percent hardwood types and 82 percent softwood types.

GROWING STOCK VOLUME--

Amounts to 844 million cubic feet;
In hardwoods is 22 percent of the total; and
Is 89 percent privately owned.

SAWTIMBER VOLUME--

Totals 3,042 million board feet, International 1/4-inch rule (2,698 million board feet, Scribner rule);
Is 83 percent privately held;
Is 86 percent of the total in trees less than 29 inches in diameter; and
Is 19 percent of the total in hardwoods.

PUBLIC OWNERSHIP--

Holds 10 percent of the commercial forest area;
Has 8 percent of the total sawtimber area;
Has 17 percent of the total sawtimber volume; but
Does not have any national forest lands.

FOREST INDUSTRY OWNERSHIP--

Controls 23 percent of the total commercial forest area;
Has 20 percent of the total sawtimber area; and
Has 13 percent of the total sawtimber volume.

FARMER AND MISCELLANEOUS PRIVATE OWNERSHIP--

Holds 67 percent of the commercial forest area;
Has 72 percent of the total sawtimber area; and
Controls 70 percent of the sawtimber volume.

AVERAGE ANNUAL CUT FOR THE PAST 5 YEARS--

Has been 77 million board feet, International 1/4-inch rule (68 million board feet, Scribner rule); and
Has been 93 percent softwoods.

Table 1.--Area by land classes, Island and Kitsap Counties, 1959; San Juan County, 1960

(In acres)

Land class	Total	Island	Kitsap	San Juan
Commercial forest	369,000	87,000	206,000	76,000
Unproductive forest	--	--	--	--
Productive-reserved forest	6,000	1,000	--	5,000
Total forest land	375,000	88,000	206,000	81,000
Nonforest	1/124,000	1/44,000	1/51,000	29,000
All land	2/499,000	2/132,000	2/257,000	2/110,000

1/ Includes 666 acres of water according to Survey standards of area classification but defined by Bureau of the Census as land.

2/ From U.S. Bureau of the Census, Land and Water Area of the United States, 1950.

Table 2.--Area of commercial forest land, by stand-size and ownership classes, Island and Kitsap Counties, 1959; San Juan County, 1960

(In acres)

Stand-size class	All ownerships	Public	Forest industry	Farmer and miscellaneous private
Sawtimber stands:				
Large	21,000	11,000	3,000	7,000
Small	170,000	5,000	35,000	130,000
Total	191,000	16,000	38,000	137,000
Poletimber stands	142,000	10,000	43,000	89,000
Sapling and seedling stands	36,000	12,000	5,000	19,000
Nonstocked areas	--	--	--	--
All classes	369,000	38,000	86,000	245,000

Table 3.--Area of commercial forest land, by stocking classes of growing-stock trees and by stand-size classes, Island and Kitsap Counties, 1959; San Juan County, 1960

(In acres)

Stocking class	All stands	Sawtimber stands	Poletimber stands	Sapling and seedling stands	Nonstocked stands
70 percent or more	280,000	158,000	102,000	20,000	(1/)
40 to 70 percent	66,000	30,000	26,000	10,000	(1/)
10 to 40 percent	23,000	3,000	14,000	6,000	(1/)
Less than 10 percent	0	(1/)	(1/)	(1/)	0
All classes	369,000	191,000	142,000	36,000	0

1/ Not applicable.

Table 4.--Area of commercial forest land, by forest types and ownership classes, Island and Kitsap Counties, 1959; San Juan County, 1960

(In acres)

Type	All ownerships	Public ownerships	Private ownerships
Douglas-fir	274,000	37,000	237,000
Grand fir	6,000	--	6,000
Western hemlock	11,000	1,000	10,000
Western redcedar	10,000	--	10,000
Red alder	59,000	--	59,000
Other hardwoods	9,000	--	9,000
All types	369,000	38,000	331,000

Table 5.--Area of noncommercial forest land, by forest types, Island and Kitsap Counties, 1959; San Juan County, 1960

(In acres)

Type	All areas	Productive-reserved areas	Unproductive areas
Douglas-fir	4,000	4,000	--
Western hemlock	1,000	1,000	--
Lodgepole pine	1,000	1,000	--
All types	6,000	6,000	--

Table 6.--Volume of growing stock and sawtimber on commercial forest land, Island and Kitsap Counties, 1959; San Juan County, 1960

County	Growing stock	Sawtimber	
		International ¼-inch rule	Scribner rule
	Million cu. ft.	Million bd. ft.	
Island	200	738	673
San Juan	231	1,014	839
Kitsap	413	1,290	1,186
Total	844	3,042	2,698

Table 7.--Volume of timber on commercial forest land, by class of timber and by softwoods and hardwoods, Island and Kitsap Counties, 1959; San Juan County, 1960

Class of timber	All species	Softwoods	Hardwoods
	Million cu. ft.		
Sawtimber trees:			
Saw-log portion	506	413	93
Upper-stem portion	38	31	7
Total	544	444	100
Poletimber trees	300	216	84
All growing-stock trees	844	660	184
Sound cull trees:			
Sawtimber-size	4	--	4
Poletimber-size	15	1	14
Total	19	1	18
Rotten cull trees:			
Sawtimber-size	--	--	--
Poletimber-size	1	--	1
Total	1	--	1
Salvable dead trees:			
Sawtimber-size	15	13	2
Poletimber-size	--	--	--
Total	15	13	2
Total, all timber	879	674	205

Table 8.--Volume of growing stock and sawtimber on commercial forest land, by ownership classes and by softwoods and hardwoods, Island and Kitsap Counties, 1959; San Juan County, 1960

Timber and ownership classes	All species	Softwoods	Hardwoods
	Million cu. ft.	Million cu. ft.	Million cu. ft.
Growing stock:			
Public	90	86	4
Forest industry	142	110	32
Farmer and miscellaneous private	612	464	148
All ownerships	844	660	184
	Million bd. ft.	Million bd. ft.	Million bd. ft.
Sawtimber (International ¼-inch rule):			
Public	527	502	25
Forest industry	384	340	44
Farmer and miscellaneous private	2,131	1,626	505
All ownerships	3,042	2,468	574
Sawtimber (Scribner rule):			
Public	447	424	23
Forest industry	339	294	45
Farmer and miscellaneous private	1,912	1,423	489
All ownerships	2,698	2,141	557

Table 9.--Volume of growing stock on commercial forest land, by species and diameter classes, Island and Kitsap Counties, 1959; San Juan County, 1960

Species	Diameter class (inches at breast height)										
	All classes	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-28.9	29.0-38.9	39.0 and larger
	Million cubic feet										
Softwoods:											
Douglas-fir	515	34	57	78	69	64	45	40	85	24	19
Western white pine	10	1	1	4	1	1	1	--	1	--	--
Lodgepole pine	3	--	1	--	1	--	--	--	1	--	--
Grand fir	39	--	1	3	5	3	3	4	12	--	8
Sitka spruce	2	--	--	--	--	--	--	--	2	--	--
Western hemlock	48	6	10	6	7	6	3	1	7	2	--
Western redcedar	43	4	7	2	8	2	5	3	6	6	--
Total	660	45	77	93	91	76	57	48	114	32	27
Hardwoods:											
Red alder	148	19	29	22	27	24	10	3	14	--	--
Quaking aspen	3	2	1	--	--	--	--	--	--	--	--
Bigleaf maple	30	1	4	4	4	1	2	2	9	3	--
Pacific madrone	3	2	--	--	--	--	1	--	--	--	--
Total	184	24	34	26	31	25	13	5	23	3	--
All species	844	69	111	119	122	101	70	53	137	35	27

Table 10.--Volume of sawtimber on commercial forest land, by species and diameter classes, Island and Kitsap Counties, 1959; San Juan County, 1960 (International ¼-inch rule)

Species	Diameter class (inches at breast height)							
	All classes	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-28.9	29.0-38.9	39.0 and larger
	Million board feet							
Softwoods:								
Douglas-fir	1,940	270	302	247	237	557	176	151
Western white pine	19	4	4	3	--	8	--	--
Lodgepole pine	10	2	2	--	--	6	--	--
Grand fir	211	19	10	17	22	73	--	70
Sitka spruce	13	--	--	--	--	13	--	--
Western hemlock	150	39	30	17	6	48	10	--
Western redcedar	125	26	11	18	15	26	29	--
Total	2,468	360	359	302	280	731	215	221
Hardwoods:								
Red alder	422	121	115	59	18	109	--	--
Bigleaf maple	145	12	8	13	9	103	--	--
Pacific madrone	7	1	2	4	--	--	--	--
Total	574	134	125	76	27	212	--	--
All species	3,042	494	484	378	307	943	215	221

Table 11.--Volume of sawtimber on commercial forest land, by species and diameter classes, Island and Kitsap Counties, 1959; San Juan County, 1960 (Scribner rule)

Species	All classes	Diameter class (inches at breast height) 11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-28.9	29.0-38.9	39.0 and larger
	Million board feet							
Softwoods:								
Douglas-fir	1,672	230	259	211	203	489	154	126
Western white pine	18	4	4	3	--	7	--	--
Lodgepole pine	9	2	2	--	--	5	--	--
Grand fir	179	16	9	15	19	62	--	58
Sitka spruce	11	--	--	--	--	11	--	--
Western hemlock	137	36	26	16	5	45	9	--
Western redcedar	115	23	11	17	13	23	28	--
Total	2,141	311	311	262	240	642	191	184
Hardwoods:								
Red alder	408	115	110	58	17	108	--	--
Bigleaf maple	143	12	8	12	9	72	30	--
Pacific madrone	6	1	2	3	--	--	--	--
Total	557	128	120	73	26	180	30	--
All species	2,698	439	431	335	266	822	221	184

Table 12.--Volume of salvable dead sawtimber-size trees on commercial forest land, by softwoods and hardwoods, Island and Kitsap Counties, 1959; San Juan County, 1960

Species group	Volume	
	International ¼-inch rule	Scribner rule
	Million bd. ft.	
Softwoods	72	63
Hardwoods	11	11
All species	83	74

Table 13.--Annual mortality of growing stock and sawtimber on commercial forest land, by ownership classes and by softwoods and hardwoods, Island and Kitsap Counties, 1959; San Juan County, 1960

Ownership class	Growing stock			Sawtimber (International 1/4-inch rule)			Sawtimber (Scribner rule)		
	All species	Softwoods	Hardwoods	All species	Softwoods	Hardwoods	All species	Softwoods	Hardwoods
	----Million cu. ft.----			----Million bd. ft.----			----Million bd. ft.----		
Public	1	1	--	2	2	--	2	2	--
Forest industry	1	1	--	2	1	1	2	1	1
Farmer and miscellaneous private	6	3	3	13	8	5	12	7	5
All ownerships	8	5	3	17	11	6	16	10	6

Table 14.--Number of growing-stock trees on commercial forest land, by diameter classes and by softwoods and hardwoods, Island and Kitsap Counties, 1959; San Juan County, 1960

Diameter class (inches d.b.h.)	All species	Softwoods	Hardwoods
5.0 - 6.9	23,152,000	17,492,000	5,660,000
7.0 - 8.9	15,077,000	11,001,000	4,076,000
9.0 - 10.9	8,543,000	6,810,000	1,733,000
11.0 - 12.9	5,926,000	4,417,000	1,509,000
13.0 - 14.9	3,337,000	2,429,000	908,000
15.0 - 16.9	1,687,000	1,334,000	353,000
17.0 - 18.9	983,000	882,000	101,000
19.0 - 28.9	1,650,000	1,332,000	318,000
29.0 - 38.9	206,000	176,000	30,000
39.0 and larger	48,000	48,000	--
All classes	60,609,000	45,921,000	14,688,000

Table 15.--Number of cull and salvable dead trees on commercial forest land, by diameter groups and by softwoods and hardwoods, Island and Kitsap Counties, 1959; San Juan County, 1960

Diameter class (inches d.b.h.)	Cull trees	Salvable dead trees
Softwoods:		
5.0 - 10.9	428,000	--
11.0 - 18.9	36,000	239,000
19.0 and larger	14,000	103,000
Total	478,000	342,000
Hardwoods:		
5.0 - 10.9	2,518,000	--
11.0 - 18.9	160,000	100,000
19.0 and larger	79,000	--
Total	2,757,000	100,000
All species	3,235,000	442,000

Table 16.--Timber harvest by ownership class, Island, Kitsap, and San Juan Counties, 1950-60 (Scribner rule)

Year[1/]	Private	State	Other public	Total
	Thousand board feet			
1950	105,922		--	105,922
1951	129,700		--	129,700
1952	101,559		55	101,614
1953	62,907		36	62,943
1954	54,886		503	55,389
1955	66,562	--	--	66,562
1956	91,814	737	2,313	94,864
1957	62,632	1,454	20	64,106
1958	45,589	103	--	45,692
1959	63,051	--	--	63,051
1960	54,652	2,919	--	57,571

[1/] For the years 1950-54, data for private and State ownerships were not separated.

ACCURACY OF 1959 AND 1960 REINVENTORY DATA

Forest Area and Timber Volume

Estimates of forest area and timber volume were obtained by sampling and they therefore have sampling errors. Sampling errors were calculated for only the major items as shown in table 17.

Table 17 implies that the values which would result from a 100-percent sample lie within the ranges indicated for the specified probabilities.

Table 17.--Sampling error of estimates of forest area and timber volume

Item	Estimated total	Sampling error in percent	
		Odds, 2 out of 3	Odds, 19 out of 20
Commercial forest land	369,000 acres	±3.2	±6.2
Noncommercial forest land	6,000 acres	0	0
Volume (Scribner)	2,698 million board feet	±14.2	±27.8
Volume	844 million cubic feet	±9.7	±19.1

Sampling errors for estimates other than total area or total volume were not calculated. However, sampling errors for these can be roughly approximated by using figure 1.

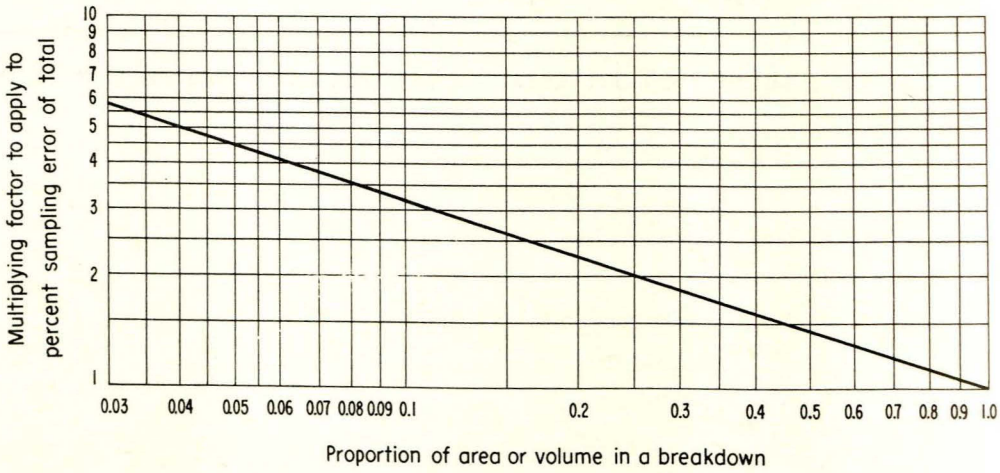

Figure 1.--Ratio of sampling error of an area or volume breakdown to sampling error of total area or volume.

For example, assume that the sampling error reported for a total is ±5 percent, and an estimate of the sampling error for an item which is only 0.25 of this total is desired. Reading from figure 1, the multiplying factor for a proportion of 0.25 is 2. The estimated sampling error for the item is then 2 times ±5 percent, the sampling error of the total, or ±10 percent.

DIFFERENCES IN RESULTS OF INVENTORIES

Some of the differences between the forest-area and timber-volume statistics from the previous inventory and those from the current reinventory are due to physical change, such as cutting of stands, restocking of deforested areas, and growth of stands into the next larger size class. Some are due to variations in the procedures used to interpret and classify forest conditions, to variations in standards of utilization, and to changes in Forest Survey standards and definitions. These variations make it difficult to draw meaningful conclusions from comparison of the statistics of the two inventories; however, certain general facts concerning these counties' present forest condition appear evident. For one, the area of commercial forest land has remained about constant between inventories.

Also, even considering the differences in standards of the two inventories, it appears that there has been a real increase in the sawtimber volume between inventories. Hardwood volume shows the greatest increase, probably as a result of hardwood regeneration on cutover conifer lands reaching sawtimber size between the inventories.

Table 18.--Comparison of forest area statistics for Island, Kitsap, and San Juan Counties, previous inventory and current reinventory[1/]

(In acres)

Land-use class	Previous inventory	Current reinventory
Commercial forest	356,000	369,000
Noncommercial:		
Productive-reserved	3,000	6,000
Unproductive	23,000	--
Total forest	382,000	375,000
Nonforest	115,000	124,000
Total	497,000	499,000

[1/] Inventory years were:

	Previous inventory	Current reinventory
San Juan	1932	1960
Island	1932	1959
Kitsap	1940	1959

Table 19.--Comparison of timber volume statistics for Island, Kitsap, and San Juan Counties, previous inventory and current reinventory[1/]

(Million board feet, Scribner)

Species	Previous inventory	Current reinventory
Softwoods:		
Douglas-fir	500	1,672
Western hemlock	12	137
Western redcedar	14	115
Other	14	217
Total	540	2,141
Hardwoods:		
Red alder	11	408
Other	2	149
Total	13	557
All species	553	2,698

[1/] Inventory years were:

	Previous inventory	Current reinventory
San Juan	1932	1960
Island	1932	1959
Kitsap	1940	1959

FOREST SURVEY PROCEDURES

Procedures used in the reinventory of Island, Kitsap, and San Juan Counties were materially different from those used in the previous inventory.

The Forest Survey sampling plan made use of a double sampling procedure. The basic sample consisted of field plots located on a systematic grid, 2.4 miles square in Island County and 3.4 miles square in Kitsap and San Juan Counties. The field plots were supplemented by a systematic grid of photo plots. All the photo plots and field plot locations were examined on aerial photographs and classified into one of three land-use classes: nonforest, noncommercial forest, or commercial forest land.

The field plots consisting of a cluster of three 1/5-acre circular subplots spaced at 6-chain intervals were located, established, and measured in the field. These plots provided a check on the accuracy of the photo interpretation of land-use class and were combined with the photo plots to provide an adjusted estimate of the proportion of area by land-use classes.

The field plots also provided data on ownership, forest type, stocking, etc., for use in subdividing the adjusted gross commercial forest land area into area by ownership class, forest type, stand-size class, and stocking class.

Tree measurement data obtained on the field plots, expanded by the total adjusted acreage of commercial forest land, provided estimates of volume and mortality by species and size class as well as by ownership.

DEFINITION OF TERMS

Land Area

Total Land Area

Includes dry land and unmeandered water surfaces.

Forest Land Area

Land at least 10 percent stocked by trees of any size, or formerly having such tree cover, and not currently developed for nonforest use. Minimum area of forest land recognized in reinventory was 10 acres where type maps were used, and 1 acre where sampling procedures were used.

Nonforest Land Area

Land that does not qualify as forest land. Minimum area recognized in the reinventory of the counties was 10 acres where type maps were used and 1 acre where sampling procedures were used.

Forest Land Classes

Commercial Forest Land Area

Forest land which is producing or capable of producing industrial wood and not withdrawn from timber utilization.

Noncommercial Forest Land Area

Unproductive forest land incapable of yielding crops of industrial wood because of adverse site conditions, and productive public forest land withdrawn from commercial timber use through statute or administrative regulation.

Types

Commercial Forest Land Type

Forest land is typed on the basis of the predominant species, as indicated by cubic volume for sawtimber and poletimber stands and number of trees for sapling and seedling stands, or on the basis of forest condition, such as nonstocked cutover or burned-over land. Where none of the indicated species comprise 50 percent or more of a given stand, the stand is classified on the basis of plurality of cubic volume or number of trees. In classifying forest land by type, the minimum area recognized is 1 acre.

Noncommercial Forest Land Types

Productive-reserved. Public forest land withdrawn from timber utilization through statute, ordinance, or administrative order but which otherwise qualifies as commercial forest land. Types designated the same as for commercial forest land.

Unproductive. Forest land incapable of yielding crops of industrial wood products (usually sawtimber) because of adverse site conditions.

Subalpine. Forest stands at the upper elevational limits of tree growth.

Noncommercial rocky. Areas within the commercial forest zone but so steep and rocky that they are incapable of producing usable wood products.

Nonforest Land Types

Vegetative. Cultivated land, stump pasture, grass, or brush on nonforest land.

Nonvegetative. Includes barrens and towns.

Unmeandered water. Includes unmeandered streams and lakes, and tideflats.

Tree Classes

Sawtimber Tree

Tree of commercial species, 11.0 inches d.b.h. and larger, that contains at least one 16-foot coniferous saw log or one 8-foot hardwood saw log to a variable top diameter never less than 8 inches inside the bark. Also, 25 percent or more of the gross board-foot volume must be free from rot or defect.

Poletimber Tree

Tree of commercial species, 5.0 to 10.9 inches d.b.h., in which 25 percent or more of the gross cubic-foot volume is free from rot and defect.

Sapling and Seedling Trees

Live trees of commercial species, less than 5.0 inches d.b.h., and of good form and vigor.

Cull Tree

Live tree of sawtimber or poletimber size that is unmerchantable for saw logs, now or prospectively, because of defect, rot, or species.

Sound cull tree. Live tree of sawtimber or poletimber size that contains 25 percent or more of sound volume but will not make at least one merchantable saw log, now or prospectively, because of roughness, poor form, or species.

Rotten cull tree. Live tree of sawtimber or poletimber size in which less than 25 percent of the total volume is sound.

Mortality Tree

Tree which has died from natural causes and which was not a cull tree at the time of death.

Salvable Dead Tree

Standing or down dead tree that contains 25 percent or more of sound volume and at least one merchantable 16-foot coniferous or 8-foot hardwood saw log.

Stand-Size Classes

Sawtimber Stand

Stand of sawtimber trees having a minimum per-acre net volume of 1,500 board feet (International 1/4-inch rule).

Large sawtimber stand. Stand in which the majority of the volume is in trees 21.0 inches d.b.h. and larger.

Small sawtimber stand. Stand in which the majority of the volume is in trees from 11.0 to 20.9 inches d.b.h.

Poletimber Stand

Stand failing to meet sawtimber stand specifications but at least 10 percent stocked with poletimber and larger (5.0 inches d.b.h. and larger) trees and with at least half the minimum stocking in poletimber trees.

Sapling and Seedling Stand

Stand not qualifying as either a sawtimber or poletimber stand but at least 10 percent stocked with trees of commercial species and with at least half the minimum stocking in sapling and seedling trees.

Nonstocked Area

An area less than 10 percent stocked with present or potential growing-stock trees.

Stocking

Stocking is the extent to which growing space is effectively utilized by present or potential growing-stock trees of commercial species. "Degree of stocking" is synonymous with "percentage of growing space occupied" and means the ratio of actual stocking to full stocking for comparable sites and stands. Stocking may be measured in terms of number of trees, volume, basal area, cover canopy, or other criterion or combination of criteria.

Well-Stocked Stand

A stand that is 70 percent or more stocked with present or potential growing-stock trees.

Medium-Stocked Stand

A stand that is 40 to 69 percent stocked with present or potential growing-stock trees.

Poorly Stocked Stand

A stand that is 10 to 39 percent stocked with present or potential growing-stock trees.

Nonstocked Area

An area less than 10 percent stocked with present or potential growing-stock trees.

Timber Volume

Live Sawtimber Volume

Net volume in board feet of live sawtimber trees of commercial species:

Scribner rule. The common board-foot log rule used in determining volume of sawtimber in the Pacific Northwest.

International 1/4-inch rule. The standard board-foot log rule adopted nationally by the Forest Service for the presentation of Forest Survey volume statistics.

Growing Stock

Net volume in cubic feet of live sawtimber trees and live poletimber trees from stump to a minimum 4.0-inch top (of central stem) outside bark.

All-Timber Volume

Net volume in cubic feet of live and salvable dead sawtimber trees and poletimber trees of commercial species, and cull trees of all species from stump to a minimum 4.0-inch top outside bark.

Ownership Classes

Other Federal Lands

Federal lands other than national forests, including lands administered by the Bureau of Land Management, Bureau of Indian Affairs, and miscellaneous Federal agencies.

State, County, and Municipal Lands

Lands owned by States, counties, and local public agencies, or lands leased by these governmental units for more than 50 years.

Forest Industry Lands

Lands owned by companies or individuals operating wood-using plants.

Farmer-Owned Lands

Lands owned by operators of farms.

Miscellaneous Private Lands

Privately owned lands other than forest industry or farmer-owned lands.

TREE SPECIES

Tree species commonly found in Island, Kitsap, and San Juan Counties include:

Softwoods:

Douglas-fir (Pseudotsuga menziesii)
Grand fir (Abies grandis)
Lodgepole pine (Pinus contorta)
Sitka spruce (Picea sitchensis)
Western hemlock (Tsuga heterophylla)
Western redcedar (Thuja plicata)
Western white pine (Pinus monticola)

Hardwoods:

Bigleaf maple (Acer macrophyllum)
Pacific madrone (Arbutus menziesii)
Quaking aspen (Populus tremuloides)
Red alder (Alnus rubra)

RECENT FOREST SURVEY REPORTS

Number	Title	Date
141	Forest Statistics for Pierce County, Washington	May 1962
140	1960 Washington Log Production	March 1962
139	Forest Statistics for Okanogan County, Washington	March 1962
138	1960 Oregon Log Production	January 1962
137	Forest Statistics for Grant County, Oregon	November 1960
136	Forest Statistics for Southeast Washington	July 1960
135	Forest Statistics for Umatilla and Union Counties, Oregon	April 1960
134	Forest Statistics for Wallowa County, Oregon	April 1960
133	Forest Statistics for Skagit and Whatcom Counties, Washington	September 1959
132	Forest Statistics for Baker and Malheur Counties, Oregon	October 1958
131	Forest Resources and Forest Industries of Lane County, Oregon	December 1957
130	Forest Statistics for Tillamook County, Oregon	December 1957

Available from:

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